DESIGN/CONSTRUCT PARKDALE FACILITIES, COMPLETE OAK SPRINGS CONSTRUCTION , OPERATE AND MAINTAIN FACILITIES (HOOD RIVER PRODUCTION PROGRAM) 9301900

SHORT DESCRIPTION:

Design and construct adult holding, spawning and acclimation facilities near Parkdale, develop additional water supply to supplement existing water supply at Oak Springs Hatchery, and provide O &M for Powerdale, Oak Springs Hatchery and Parkdale

SPONSOR/CONTRACTOR: ODFW
Oregon Department Fish and Wildlife
Paul Johnson, Chief Engineer
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503/872-5299 x5399

SUB-CONTRACTORS:

Confederated Tribes of the Warm Springs Reservation of Oregon

GOALS

GENERAL:

Supports a healthy Columbia basin, Maintains biological diversity, Maintains genetic integrity, Increases run sizes or populations, Provides needed habitat protection, Fish Propagation

ANADROMOUS FISH:

Production, O&M

NPPC PROGRAM MEASURE:

7.4L.2

RELATION TO MEASURE:

NPPC Program measures identify activities needed to implement the Hood River Production Program (HRPP). This project involves the construction of the remaining two of the four physical facilities necessary to fully implement the HRPP and the operation and maintenanceof these facilities. The two previous completed facilities include the Pelton Ladder rearing cells, and the Powerdale Fish Facility and access road.

BIOLOGICAL OPINION ID:

N/A

OTHER PLANNING DOCUMENTS:

N/A

TARGET STOCK	LIFE STAGE	MGMT CODE (see below)
Deschutes stock spring chinook	All	se
Hood River stock summer steelhead	All	swp
Hood River stock winter steelhead	All	swp

AFFECTED STOCK	BENEFIT OR DETRIMENT
Bull trout	Beneficial
Fall chinook salmon	Unknown
Coho salmon	Unknown

BACKGROUND

LAND AREA INFORMATION

Stream name:

Subbasin:

Hood River

Hood River

Land ownership:
both

Acres affected:
225,352

HISTORY:
The Northwest Power Planning Council approved the Hood River and Pelton ladder master plans in 1992. The program implemented in the Hood River subbasin was initially called the Northeast Oregon Hatchery Project (NEOH) and later changed to the Hood River Production Program (HRPP). It is a joint effort between CTWS and ODFW and is designed to improve natural production of summer and winter steelhead and re-establish spring chinook salmon in the subbasin. BPA began funding the monitoring and evaluation component of HRPP in August, 1992 and there are now four years of baseline information. The EIS was completed in the summer, 1996. The HRPP completed Pelton ladder rearing cells, Powerdale road and fish trapping facilities in 1996, and major components of Oak Springs Hatchery (where summer and winter steelhead rearing will occur) will be completed during FY 97. This project (9301900) includes construction of Parkdale facilities, which are necessary for holding and spawning adult winter and summer steelhead and spring chinook salmon, and completing Oak Springs Hatchery modifications of existing water supply, and O&M to operate and maintain the facilities associated with the program.

BIOLOGICAL RESULTS ACHIEVED:
Construction of Powerdale road and trapping facilities has allowed us to gather baseline information and capture broodstock more effectively. Modifications made at Pelton Ladder enabled Hood River bound spring chinook smolts to be reared there. The expansion at Oak Springs Hatchery in 1997 will allow us to begin the hatchery program for Hood River stock summer steelhead and meet project production objectives for winter steelhead. Use of temporary acclimation facilities in the most recent steelhead release resulted a 38 to 76 percent increase in post-release survival.

PROJECT REPORTS AND PAPERS:
Bonneville Power Administration. 1996. Final environmental impact statement. Bonneville Power Administration (Contract DOE/EIS-02241). Portland, Oregon.
O'Toole, P., and Oregon Department of Fish and Wildlife. 1991. Hood river production master plan. Final report of the Confederated Tribes of the Warm Springs Reservation and the Oregon Department of Fish and Wildlife (Project 88-053, Contract DE-B179-89BP00631) to Bonneville Power Administration, Portland, Oregon.
Smith, M., and Confederated Tribes of the Warm Springs Reservation of Oregon. 1991. Pelton Ladder master plan. Final Report of the Oregon Department of Fish and Wildlife and the Confederated Tribes of the Warm Springs Reservation (Project 89-029, Contract DE-BI79-89BP01930) to Bonneville Power Administration, Portland, Oregon.
Olsen, E.A., R.A. French, J.A. Newton. 1994. Hood River and Pelton Ladder evaluation studies. Annual Progress Report of Confederated Tribes of the Warm Springs Reservation and Oregon Department of Fish and Wildlife.

ADAPTIVE MANAGEMENT IMPLICATIONS:
Construction of the Powerdale road and trapping facilities, construction of fish production facilities at Oak Springs Hatchery and modifications to Pelton Ladder has provided the opportunity to begin restoration of indigieous steelhead stocks, as well as the reintroduction of spring chinook in Hood River subbasin. Identification of all Hood River hatchery fish provides opportunity for evaluation of implementation of project objectives.

PURPOSE AND METHODS

SPECIFIC MEASUREABLE OBJECTIVES:
To provide needed facilities for rebuilding summer and winter steelhead trout populations and reintroduction of spring chinook using supplementation techniques in the Hood River Basin in accordance with the Hood River Production Master Plan of July 1991. Project objectives include the production of 150,000 summer steelhead, 85,000 winter steelhead and 250,000 spring chinook smolts. Supplementation of steelhead will use hatchery reared smolts derived from wild stocks of the respective races. Reintroduction of spring chinook will be achieved through use of Deschutes stock which are from an adjacent subbasin and likely to be best suited to habitat condition found in the Hood River subbasin.

BIOLOGICAL NEED:

This project constructs the facilities and provides operation and maintenance to help counteract the continuous decline in escapement of summer and winter steelhead and extirpation of spring chinook in the Hood River subbasin. Supplementation will allow increased spawner escapement and distribution of adults which should result in increased numbers of juveniles to emigrate from the system. Ongoing and planned habitat restoration activities will result in improved egg to smolt survival. Cooperation with other entities has resulted in improved upstream and downstream fish passage.

ALTERNATIVE APPROACHES:

N/A

JUSTIFICATION FOR PLANNING:

N/A

PLANNED ACTIVITIES

SCHEDULE:

Planning Phase	**Start**	May 1, 1995 July 1, 1995 April 1997 August 1997	**End**	August 30, 1995 12/1/95 11/97 2/99	**Subcontractor**	Downing Construction Slayden Construction - Fish Facility Yet to Be Determined Yet to Be Determined

Task Pelton Ladder fish rearing cell constructionPreliminary Design - December 1994Final Design - March 1995Bid & Award Construction Contract - April 1995Construction -May - August 1995Operations - September 1995 Powerdale Fish Facility and Access Road ConstructionPreliminary Design - December 1994Final Design - March 1995Bid & Award Construction Contract - July 1995Construction - August 1995 - December 1996Operations - December 1, 1996 Oak Springs Fish Hatchery ExpansionPreliminary Design - November 1995Final Design - March 1997Bid & Award Construction Contract - March 1997Construction - April 1997Operations - November 1997 Parkdale Fish Facility Preliminary Design - November 1996Final Design - March 1997Bid & Award Construction Contract - August 1997Construction - August 1997Operations - February 1999

Implementation Phase	**Start**	7/95 4/97 2/99	**End**	11/1/97 10/30/95 ongoing	**Subcontractor**	Yet to Be Determined Portland General Electric CTWS

Task Oak Springs Fish Hatchery Expansion Pelton Ladder Fish Rearing Cell Construction Powerdale Fish Facility and Access Road Construction Parkdale Facility Operation

O&M Phase	**Start**	11/95 12/1/96 11/1/97 2/99	**End**	ongoing ongoing ongoing	**Subcontractor**	ODFW Slayden Construction - Fish Facility ODFW CTWS

Task Pelton Ladder Rearing Powerdale Fish Facility and Access Road Construction Oak Springs Hatchery Expansion Operation Parkdale Facility Operation

PROJECT COMPLETION DATE:

N/A Ongoing Project Activity

CONSTRAINTS OR FACTORS THAT MAY CAUSE SCHEDULE OR BUDGET CHANGES:

Adequate funding for construction and O&M may be at risk in future years, which could delay achievement of project production objectives. Biological and genetic risks are addressed in the "Hood River Production Master Plan."

OUTCOMES, MONITORING AND EVALUATION

SUMMARY OF EXPECTED OUTCOMES

Expected performance of target population or quality change in land area affected:
Through the use of an efficient facility for brood collection, adult holding, spawning , incubation and rearing of steelhead smolts for release into the Hood River Basin, the numbers of returning Hood River stock adult summer and winter steelhead are expected to increase to meet program objectives (i.e. 8,000 summer steelhead, and 5,000 winter steelhead). An important component in meeting this objective is converting the hatchery program to native Hood River stock. With supplementation, we should be able to reduce the hatchery program when natural production in the subbasin increases. The reintroduced population of spring chinook salmon is expected to meet the program objective of 1,700 adults to Hood River. Because Hood River spring chinook are extinct, fish from an adjacent subbasin (Deschutes) are being used for the initial reintroduction. A portion of the spring chinook returning to the Hood River system will be collected at the Powerdale fish facility for development of the hatchery broodstock, while the remaining fish will be passed upstream and available for natural spawning.

Present utilization and convservation potential of target population or area:
Current Oregon angling regulations require the release of all naturally produced steelhead caught by anglers in the Columbia and Hood rivers. The Tribes have chosen to refrain from harvest in Hood River because of low runs of fish. Only when stocks are rebuilt will they be interested in participating in a tightly regulated fishery. Commercial harvest of these steelhead stocks has been limited by the timing and duration of Zone 6 fishing seasons. This harvest protection provides the opportunity to optimize Hood River spawner escapement, as the result of zero sport harvest. Spring chinook salmon harvest has been precluded for sport anglers in the Columbia River in order to provide optimum protection for threatened or endangered upper Columbia River Basin stocks. Tribal and non-tribal harvest of this species in the Columbia River has also been restricted to protect threatened upper river stocks. There is limited sport harvest opportunity for spring chinook in the Hood River subbasin.

Assumed historic status of utilization and conservation potential:
Historical fishery data for the Hood River subbasin is generally limited to the past 40 years. Available sport harvest data show harvest approached 2500 fish in the mid-1960's. Salmon harvest in the subbasin was estimated at 250 fish in 1958. Steelhead runs began slowly declining in the 1980's and 90's, which likely reflected problems with mainstem passage, subbasin fish passage, screening and habitat degradation . Spring chinook salmon were extirpated from the subbasin by the early 1970's. The demise of this stock was also likely associated with the same factors influencing steelhead numbers. Steelhead and spring chinook (reintroduced) numbers are well below the carrying capacity of the subbasin, based on habitat availability and condition. The fish stock spawner escapement objectives [i.e. 2,400 summer steelhead; 2,400 winter steelhead; and 400 spring chinook] are based on the quantity and quality of available habitat in the subbasin.

Long term expected utilization and conservation potential for target population or habitat:
When adult summer steelhead run to the river objectives are reached there will be upto 5,400 fish available for in-river harvest. When the adult winter steelhead run to the river objectives are reached there will be up to 2,500 fish available for in-river harvest. When the adult spring chinook run to the river objective is met there will be up to 1,100 fish available for in-river harvest. In addition, there is opportunity for ocean and/or Columbia River sport or commercial harvest. When the summer steelhead population has reached the project objective for the run to the river there would be at least a 2,400 adult spawner escapement, with 165 to 200 available for hatchery brood. When the winter steelhead population has reached the project objective for the run to the river there would be at least a 2,400 adult spawner escapement, with 90 to 100 available for hatchery brood. When the spring chinook salmon population has reached the project objective for the run to the river there would be at least a 400 adult spawner escapement, with an additional 200 available for hatchery brood.

Contribution toward long-term goal:
Construction and operation of project facilities will provide the tools needed to achieve the project biological objectives of restoring self-sustaining runs of summer and winter steelhead and spring chinook.

Indirect biological or environmental changes:
N/A

Physical products:
Project physical facilities, including the Powerdale Facility, Oak Springs Hatchery expansion, and Parkdale Facility construction would be completed by the end of Fiscal Year 1998. The following numbers of project smolts are expected to be released into the Hood River subbasin during FY98: Summer Steelhead - 0; Winter Steelhead - 85,000; Spring Chinook - 125,000. All of these

smolts (100%) will be externally marked.

Environmental attributes affected by the project:
Security measures taken around adult holding and juvenile acclimation facilities will affect public use of the land in the immediate vicinity of the facilities. The Oak Springs Hatchery expansion includes the capture of additional spring water, all of which is returned to the Deschutes River after treatment. Additional water will be required at the Parkdale facility. Thi s water will be returned to the adjacent waterway near the original point of diversion.

Changes assumed or expected for affected environmental attributes:
N/A

Measure of attribute changes:
N/A

Assessment of effects on project outcomes of critical uncertainty:
Any funding shortfalls will require re-adjustment of timelines expected for meeting project construction schedules.

Information products:
The project prepares and distributes annual project M and E progress reports and other special reports.

Coordination outcomes:
The sequence of milestones were: 1. Hood River Master Plan; 2. Hood River/Pelton Ladder Master Agreement (outlines work schedules); 3. Initiation and completion of baseline studies; 4. Initiation and completion of NEPA analysis; 5. Completion of Powerdale facility and access road; 6. Expansion of Oak Springs Hatchery; and 7. Completion of Parkdale facility.

MONITORING APPROACH

Provisions to monitor population status or habitat quality:
N/A - Operation of the adult trap at Powerdale Dam combined with other M&E studies will assess the status of the target stocks [project number 8805304 ODFW M&E , and 8805303 CTWS M&E].

Data analysis and evaluation:
N/A - Data will be summarized and analyzed and reported in the M&E annual progress reports [project number 8805304 ODFW M&E , and 8805303 CTWS M&E].

Information feed back to management decisions:
N/A-Review of M&E data including stock status on a regular basis.

Critical uncertainties affecting project's outcomes:
N/A-Refer to ODFW and CTWS M&E

EVALUATION
N/A-Refer to ODFW and CTWS M&E

Incorporating new information regarding uncertainties:
N/A-Refer to ODFW and CTWS M&E

Increasing public awareness of F&W activities:
The physical presence of the fish facilities and the opportunity for the public and/or volunteers to observe or assist in various project activities will heighten public interest and awareness in efforts to restore depressed or extirpated stocks.

RELATIONSHIPS

RELATED BPA PROJECT	RELATIONSHIP
9500700 Hood River Production Program - Pge O&M	PGE-O&M
8902900 Hood River Prod'n Program - Pelton Ladder - Hatchery	Pelton Ladder-Round Butte Hatchery
8805304 Hood River Production Program - Odfw - M&E	ODFW M&E
8805303 Hood River Production Program	CTWS M&E

RELATED NON-BPA PROJECT	RELATIONSHIP
Irrigation canal fish salvage/ODFW, CTWS, USFS, volunteers	end of season fish salvage in Hood River irrigation canals
Fish passage/ODFW(BPA)	Moving Falls Fishway Construction (West Fork Hood River)
Fish habitat restoration/ODFW STEP	Habitat restoration on Hood River tributaries
Fish inventory and fish stock restoration/ODFW	Operation of temporary Powerdale trap and preliminary winter steelhead brood collection
Instream water right /ODFW	acquire instream water rights for Hood River and tributaries
Fish habitat restoration/CTWS (BPA)	Hood River tributary habitat restoration
East Fork Irrigation District	downstream migrant screening
Downstream migrant screening and habitat restoration/Farmers Irrigation District	screening and habitat restoration on Hood River tributaries
Temporary adult holding/Middle Fork Irrigation District	Winter steelhead brood holding area
Fish habitat inventory and restoration/USFS	Stream habitat improvements on Hood River tributaries
Fish inventory/USFS	Radio telemetry/upstream migrant trapping
Powerdale hydroelectric/PacifiCorp	passage/environmental and fish studies

OPPORTUNITIES FOR COOPERATION:

The four other listed projects are all components of the Hood River Production Program and, along with 9301900 are vital to implementation of the Hood River Master Plan. Equipment and personnel within these projects are shared when needed.

COSTS AND FTE

1997 Planned: $1,545,000

FUTURE FUNDING NEEDS:

FY	$ NEED	% PLAN	% IMPLEMENT	% O AND M
1998	$4,167,408	0%	86%	14%
	1998 [$300,000 - Oak Springs and $3,300,000 Parkdale] [$64,186 Oak Springs, $186,135 Powerdale, $ 252,901 Parkdale]			
1999	$363,137	0%	0%	100%
	1999 [$67,185 Oak Springs; $116,305 Powerdale, $ 179,647 Parkdale]			
2000	$397,781	0%	0%	100%
	2000 [$91,444 Oak Springs; $ 120,659 Powerdale; $ 185,678 Parkdale]			
2001	$410,845	0%	0%	100%
	2001 [$93,969 Oak Springs; $ 124,869 Powerdale; $ 192,007 Parkdale]			
2002	$431,681		0%	100%
	2002 [$103,737 Oak Springs; $ 129,289 Powerdale; $ 198,655 Parkdale]			

PAST OBLIGATIONS (incl. 1997 if done):

FY	OBLIGATED
1993	$1,925,265
1995	$1,577,329
1996	$249,197
TOTAL:	$3,751,791

Note: Data are past obligations, or amounts committed by year, not amounts billed. Does not include data for related projects.

FY	OTHER FUNDING SOURCE	AMOUNT	IN-KIND VALUE

1998	Longview Fibre, East Fork Irrigation District, Middle Fork Irrigation District, PacifiCorp, ODFW	$237,000
1999	Longview Fibre, East Fork Irrigation District, Middle Fork Irrigation District, PacifiCorp, ODFW	$237,000
2000	Longview Fibre, East Fork Irrigation District, Middle Fork Irrigation District, PacifiCorp, ODFW,	$237,000
2001	Longview Fibre, East Fork Irrigation District, Middle Fork Irrigation District, PacifiCorp, ODFW	$237,000
2002	Longview Fibre, East Fork Irrigation District, Middle Fork Irrigation District, PacifiCorp, ODFW	$237,000

OTHER NON-FINANCIAL SUPPORTERS:
Hood River Soil and Water Conservation District, Hood River Watershed Group, Farmers Irrigation District, Columbia Gorge Flyfishers, Hood River Rotary Club, Parkdale Lions Club, Hood River County Parks and Forestry Department, Columbia Gorge Commission, Columbia Gorge Scenic Area - USDA Forest Service.

1997 OVERHEAD PERCENT: ODFW - 20.5%; CTWS - 41.4%

HOW DOES PERCENTAGE APPLY TO DIRECT COSTS:
Indirect Cost applies only to personnel and service and supply costs

CONTRACTOR FTE: ODFW - 4 FTE; CTWS - 2 FTE

SUBCONTRACTOR FTE: Unknown, because this work force will be determined by the construction contractors